

From his notes in diary form we know that Kalm arrived at Quebec on August 5, 1749,¹ and that he collected extensively in the surrounding country, but unfortunately no entries were made for August 22. However, from the cited correspondence it seems fairly clear that the snowberry came originally from Canada.—H. K. SVENSON, Brooklyn Botanic Garden.

TWO NEW SPECIES OF ARCTOSTAPHYLOS FROM THE ROCKY MOUNTAINS

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NEW roads in many portions of the west have recently opened to botanical exploration areas previously unvisited. Such a road, facilitating travel in a little known region, brought to attention the two new species of *Arctostaphylos* described below.

The Uncompahgre Plateau, from which the two species were obtained, is unique as a somewhat isolated structural uplift. The plateau reaches an elevation of more than ten thousand feet, the upper reaches of which support a luxuriant vegetational cover. Proceeding to lower levels, one is amazed at the rapid transformation to an arid-transitional flora. On the north and western slopes of the plateau, among and adjacent to the Ponderosa Pines, *Arctostaphylos pinetorum* and *A. coloradensis* are to be found in abundance. Both species are gregarious, the former often forming extensive thickets on the "breakish" points of the plateau.

ARCTOSTAPHYLOS pinetorum, sp. nov. Shrub 1–2 m. high, forming dense beds 10 meters to 0.8 kilometer (half-a-mile) in diameter; stems erect or somewhat spreading, 3–10 cm. in diameter toward base, intricately and widely branched above; exfoliating bark of stems and branches dark brownish-red; branchlets and petioles glandular-puberulent; leaves erect or divergent, green, ovate, obtuse at both ends or rarely acutish at apex, entirely glabrous or often minutely glandular near base; blade 2–4 cm. long, 1.5–2.5 cm. wide; inflorescence loosely paniculate, flowers few; bracts and rachis minutely glandular-puberulent; bracts subulate to broadly lanceolate, acute; pedicels glabrous, 2–6 mm. long; corolla white to rose, 5–8 mm. long; sepals orbicular and rounded at apex, scarious-margined; mature berry creamy white to yellowish-brown, round to depressed-globose, shining and glabrous, flesh farinaceous; nutlets 3–5, usually coalescent, smooth, light brown in color.

¹ Travels into North America, ed. Forster 445 (1772).

Frutex 1–2 m. alta; caulibus erectis, divaricato-ramosis; ramis vetustioribus rubidis, glabris; ramis junioribus et petiolis glanduloso-puberulentibus; foliis erectis vel divaricatis, viridibus, glabris, ovatis; laminis 2–4 cm. longis, 1.5–2.5 cm. latis; inflorescentiis paniculatis; bracteis rachique glanduloso-puberulentibus; bracteis subulatis vel lanceolatis; pedicellis 2–6 mm. longis, glabris; corolla alba vel roseo-alba, 5–8 mm. longa; sepalis orbiculatis; drupis maturis, subalbis, glabris, depresso-globosis vel rotundis.—COLORADO: 3 miles west of Cold Spring Ranger Station, Uncompahgre Plateau, T 50 N, R 16 W, Mesa Co., Sept. 1, 1936, *Rollins 1586* (TYPE in Gray Herb.); Buckeye Basin, Montrose Co., July 20, 1912, *Walker 324* (G¹); rocky hillsides, Paradox, Montrose Co., Nov. 20, 1912, *Walker 567* (G), *Utah*: among Lodgepole Pines, Stillwater Fork, Uinta Mts., Summit Co., July 15, 1926, *Payson 4975* (G); in lodgepole forest, Uinta Mts., Aug. 13, 1931, *Greenman 4645* (G).

Although similar in many respects and probably most closely related to the Sierran *Arctostaphylos patula* Greene, this species differs in having conspicuously glandular-puberulent branchlets, a loose paniculate inflorescence of few flowers, rather uniformly ovate leaves which are nearly always erect or erect-spreading, creamy to yellowish-brown, mealy berries and a strikingly gregarious habit. These features together with a wide geographic separation, serve effectively to distinguish *A. pinetorum*.

A puzzling phenomenon concerning the berries of *Arctostaphylos pinetorum*, is the apparent dehiscence which occurs while they are still attached. The flesh curls back along indefinite lines leaving the bony nutlets exposed. That this feature is not an anomaly cannot be definitely stated; however, the fact that it was repeatedly scrutinized and generally observed in the field would lend support to such an assertion.

ARCTOSTAPHYLOS coloradensis, sp. nov. Shrub 3–6 dm. high forming dense beds 3–10 meters in diameter; stems spreading or decumbent, 1–2 cm. in diameter toward base, intricately and irregularly branched; exfoliating bark dark red, glabrous; branchlets and petioles glandular-puberulent; leaves erect, divergent or often pendulous, obovate, not cuspidate-mucronate, glabrous or minutely glandular toward base; blades 2–3 cm. long, 1–1.5 cm. wide; petioles 4–7 mm. long; inflorescence congested-paniculate; bracts and rachis glandular-puberulent; bracts lanceolate-attenuate, the lower foliaceous, oblong and acute; pedicels glabrous, 2–4 mm. long; sepals orbicular, scarious-margined; berry globose, bright red when mature; nutlets roughened, single-ribbed dorsally, more or less coalescent; flowers unknown.

¹ Gray Herbarium.

Frutex 3–6 dm. alta; caulibus ramosis, divaricatis vel decumbentibus; ramis vetustioribus rubidis, glabris; ramis junioribus et petiolis glanduloso-puberulentibus; foliis divaricatis vel erectis, viridibus, glabris, obovatis vel spathulatis, apice non cuspidatis, non mucronatis; laminis 2–3 cm. longis, 1–1.5 cm. latis; petiolis 4–7 mm. longis; paniculis congestis; bracteis inferioribus foliaceis, oblongis, apice acutis, superioribus lanceolatis, glanduloso-puberulis; sepalis orbiculatis; drupis globosis, glabris; pedicellis glabris, 2–4 mm. longis; floribus ignotis.—COLORADO: 3 miles west of Cold Spring Ranger Station, Uncompahgre Plateau, Mesa Co., Sept. 1, 1936, *Rollins 1587* (TYPE in Gray Herb.).

Arctostaphylos coloradensis is most closely related to *A. nevadensis* Gray, of the high mountains of middle California and northward, with which it agrees in pubescence and leaf-shape. The proposed species differs from *A. nevadensis* chiefly in having uniformly larger leaves which are rounded at the apex and neither cuspidate nor mucronate and in its more robust, upright habit, often reaching a height of two feet. The plants are, in general, gregarious, forming round beds rather than a continuous carpet of forest floor cover. The procumbent branches often root and send up new shoots, thus spreading the plants in a circular manner.* The wide disparity in geographic distribution of these related species virtually completes the separation.

The range of *Arctostaphylos pinetorum* and *A. coloradensis* as indicated by the specimens cited, seems to center in the north-central portion of the Colorado Plateau Province. These species then, may be considered integrants of the Rocky Mountain flora.

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¹ During the past summer, a reexamination of these two species for evidence of root-enlargement and crown-sprouting was made. Four plants of *A. pinetorum* and two of *A. coloradensis* were excavated, but none of the plants showed an appreciable root-enlargement of any sort. Crown-sprouting apparently does not take place, nor is such an adaptation required for survival, since forest fires have not been known to occur in the area, at least for the last hundred years.

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